

July 21, 2015

# Mayor & City Council Business Session

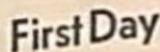
KCI Development Program Process Update



THE KANSAS CITY STAR  
KANSAS CITY, SUNDAY, NOVEMBER 12, 1972  
Highjack Dra

MAIN EDITION

KANSAS CITY, SUNDAY, NOVEMBER 12, 1972



at the right. At right center the airport control tower extended up east of the administration building and beyond was the main drainage canal reservoir and its three skimming lakes. Water from the runway, which may be contaminated with jet fuel, goes first into the skimming lakes where the floating oil can be removed. Only cleaned water is allowed to go on downstream toward the river.

(Star photo by Stephen S. Kaloupek)

(Star photo by Stephen L. Talbot)

# Good Humor Prevails at K.C.I.

Miss Michelle Brand, who provided information in Tremont, said it about eight buses, and some buses were being repossessed that had been recalled because of passenger safety.

The green express train  
...  
...  
... go down to ...

Miss Michelle Brand, who provided information in Tremont, said it about eight buses, and some buses were being repossessed that had been recalled because of passenger safety.

# Highjack Drama In Tense Shuttle

BULLETIN

By the Associated Press  
Washington (Sunday) — A  
highjacked airliner, low on oil  
and its engine weakened, land-  
ed safely in Havana early to-  
day, the Federal Aviation Ad-  
ministration here said. All the  
passengers were reported safe.  
The highjackers were an-  
nounced.

Orlando, Fla. (AP)—A high-ranking prisoner, evidently low on food and the capital, was being headed for Cuba for the next time yesterday with three or four fugitives and the 20 prisoners they had held captive as well as some authorities and

A Southern Airways spokesman said he had received reports the captain of the flight (N939) had been shot, but his name was not known.

An Orlando airport spokesman said the pilot refused to take off. "The crop had no further use to me," he said.

The northern highway ranged from Canada to and included demands for a 10-million-dollar investment to build up an active plant if the situation worsened.

In Miami, a spokesman for the Federal Aviation Administration said the pilot had been on an extensive tour.

—He did not say I think it really is emergency—should

from the way he stretched,"  
the FAA spokesman said.

"He is really in trouble, and we're talking to Harvard now, and we can't contact him, but his situation was perilous, and if he came out of all those engines will come up," the FAA official said.

The twins began their second year at the McCoy Air Force Base at Orlando, Fla. Major Carl Langford of the 44th.

An Orlando Fire Department spokesman said the plane took off with "minor difficulties" and a spokesman said there had been reports of smoking in the cockpit. The fires were shut out.

The highlanders edify  
ed three nations and stop  
in U.S. cities.

...plant to Ocala for the first  
...yesterday afternoon, but  
...and ordered the DCs to  
...China Naval Air Station  
...—Wash., Fla.

The plane left Cuba on Monday because of difficulties with Cuban authorities. It was believed to be on its way to a U.S. airport, but it was not known whether it would be able to land.

After taking on fuel in China, the plane took off at Orlando 10 miles north. The plane landed at Orlando 15 minutes after the crash while the search continued.

that is, it is a

An air traffic controller at Chicago said shortly before 9:30 a.m. (N. 44444) (NY Times). They've stuck out the three last of the way.

The marathon hijack began at 4:30 a'clock Friday night when the three fugitives from the law took over the Boeing plane at a left Birmingham, Ala., for Montgomery, Ala., and

In the space of a little more than a day, the prisoner touched down in three countries and in the morning it struck two other

Colin left yesterday afternoon to spend two hours on the grounds at Harrow, then returned to the United States—still carrying the Majestic, the 26 passenger—and the original four crew.

and bullet-proof vests placed around the jet at Chattanooga, Tenn.

The highest...  
reason for their actions,  
threatened to launch an attack  
plane into the Atlantic.  
Commissioner Nathan Felt  
Tenn., and so

...d im-  
...the first  
...in Cuba  
...pirates

air pirates—two of whom were wanted in Detroit—charged and one of them escaped from a Tennessee—married gang and a son.

A spokesman for the FBI said the FBI was not commenting on the matter.

# Kissinger Trip Hint

1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 26

...a day, a Part daily, India  
...a day, a Part daily, India

is always of a mass

# Airport Funding



## KCI Improvements are Funded by Airlines & Travelers

- City tax revenues do not, and will not, pay for airport operations, maintenance & capital projects.

## Airport Fees & Charges Stay at KCI

- Federal law prohibits diverting airport fees & charges for other City purposes.

## Airport Revenue Bonds

- Bonds are secured based only on airport fees & charges, passenger facility charges & federal grants—not with city or state taxes.

# Agenda



- Airport Terminal Advisory Group & Exhibit K
- Airline Traffic: Forecasts & Facility Requirements
- KCI Airport Considerations
- Preliminary Findings & Next Steps

# Airport Terminal Advisory Group & Exhibit K



# Terminal Improvement Program

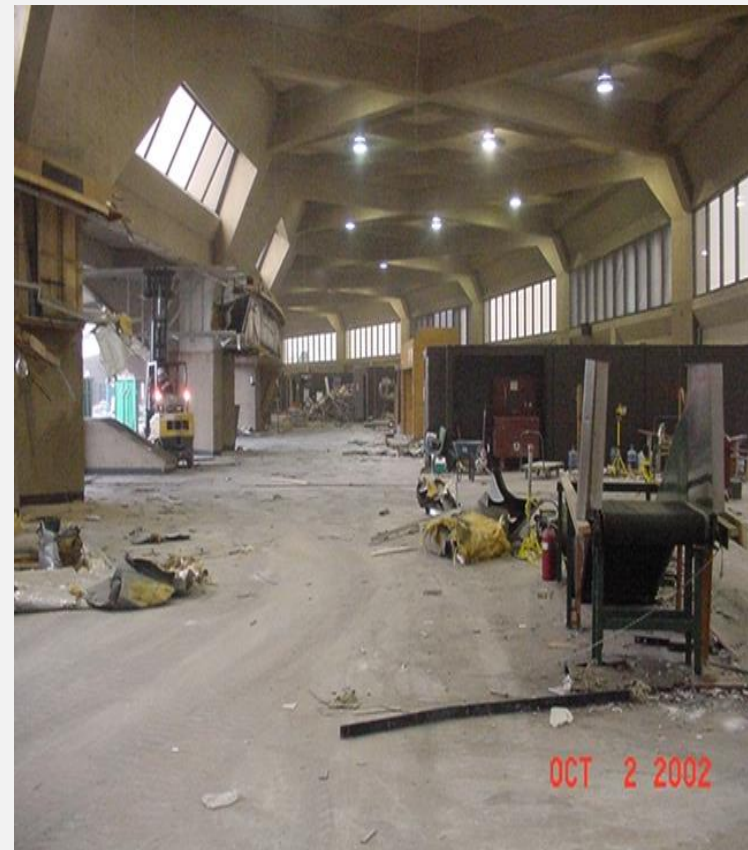
Terminal Improvement Program (TIP), 1995-2004  
included Complete Removal of Interior Down to  
Concrete Frame

**1995** Airport Master Plan/approved by the FAA,  
the Terminal Improvement Program – **TIP** was  
initiated.

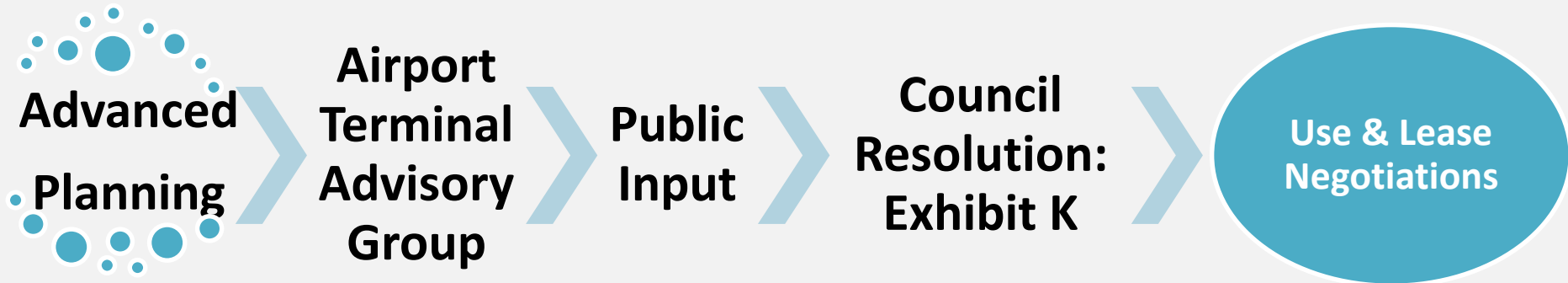
**1998 - 2000:** Completed designs for  
construction/bid documents. Construction  
phasing determined with airline approval.

**2000-2004:** TIP construction takes place in  
multiple phases in each of the three terminals.

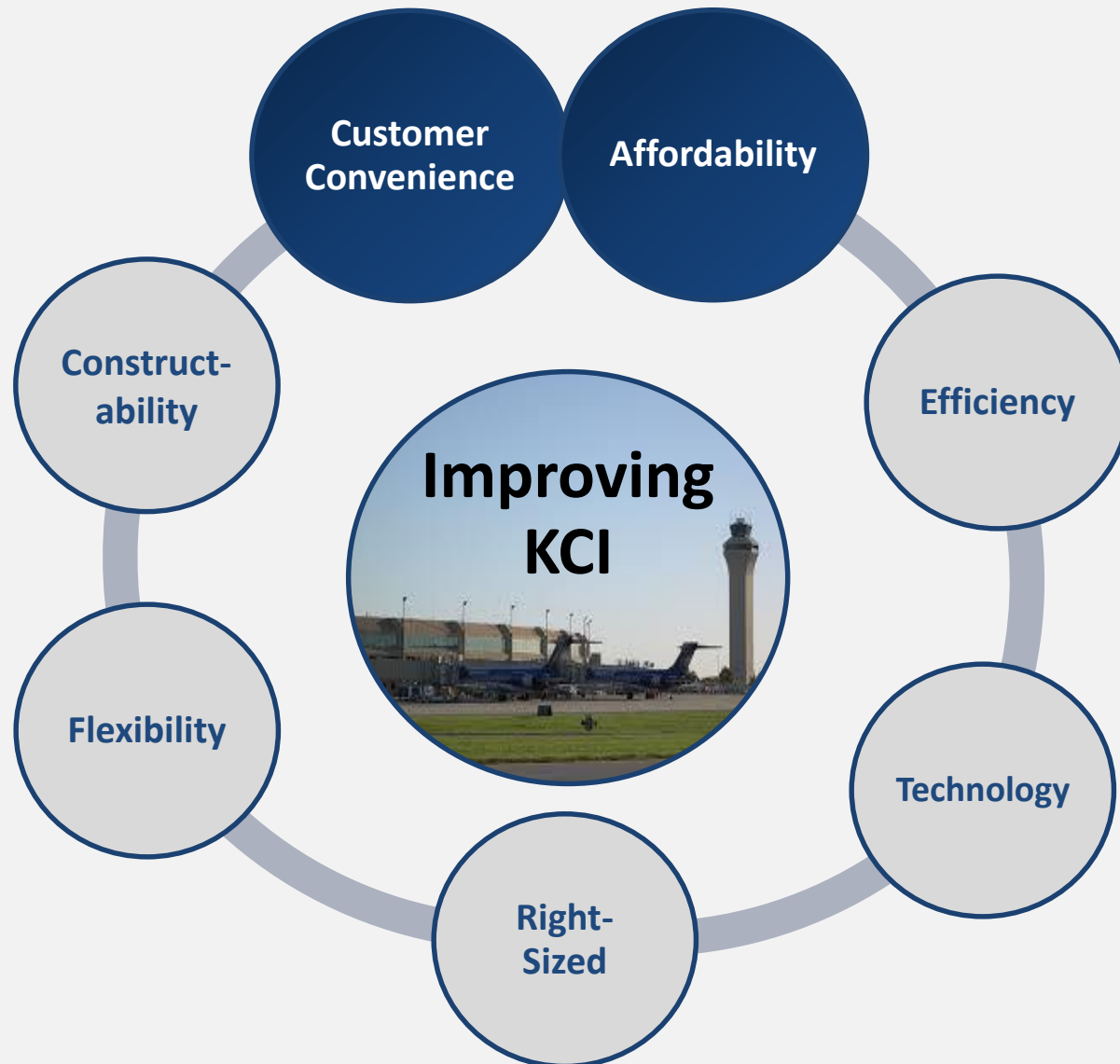
**Program Costs total \$258 million**  
*(today's dollars = \$420 million)*



# Airport Terminal Advisory Process



# Exhibit K: Program Goals





# Exhibit K: Planning Process



## Traffic Forecasts

*Completed:  
Sept. 2014*

## Facility Requirements

*Completed:  
Nov. 2014*

## Alternatives & Planning

*In Progress*

## Exhibit K Initial Findings

*In Progress*

# Exhibit K: Process Summary



- Customer convenience and affordability are top priorities.
- Requires Airport and Airline collaboration in evaluating airport and airline data.
- Evaluates major renovation & new terminal alternatives.
- Complete on or before May 1, 2016.
- **Doing nothing is not an option.**

# Airline Traffic: Forecasts & Facility Requirements



# Forecast Approach

## Airline input

Proprietary airline forecasts were collected in confidential conference calls, correspondence and in-person interviews.

## City-pairs

Analyzed city-pair markets based on airline input on service to existing and new destinations to prepare forecasted schedules

## Operations

Derived Avg. Day Peak Month (ADPM) passenger airline aircraft operations based on forecasted schedules and aircraft fleets

## Passengers

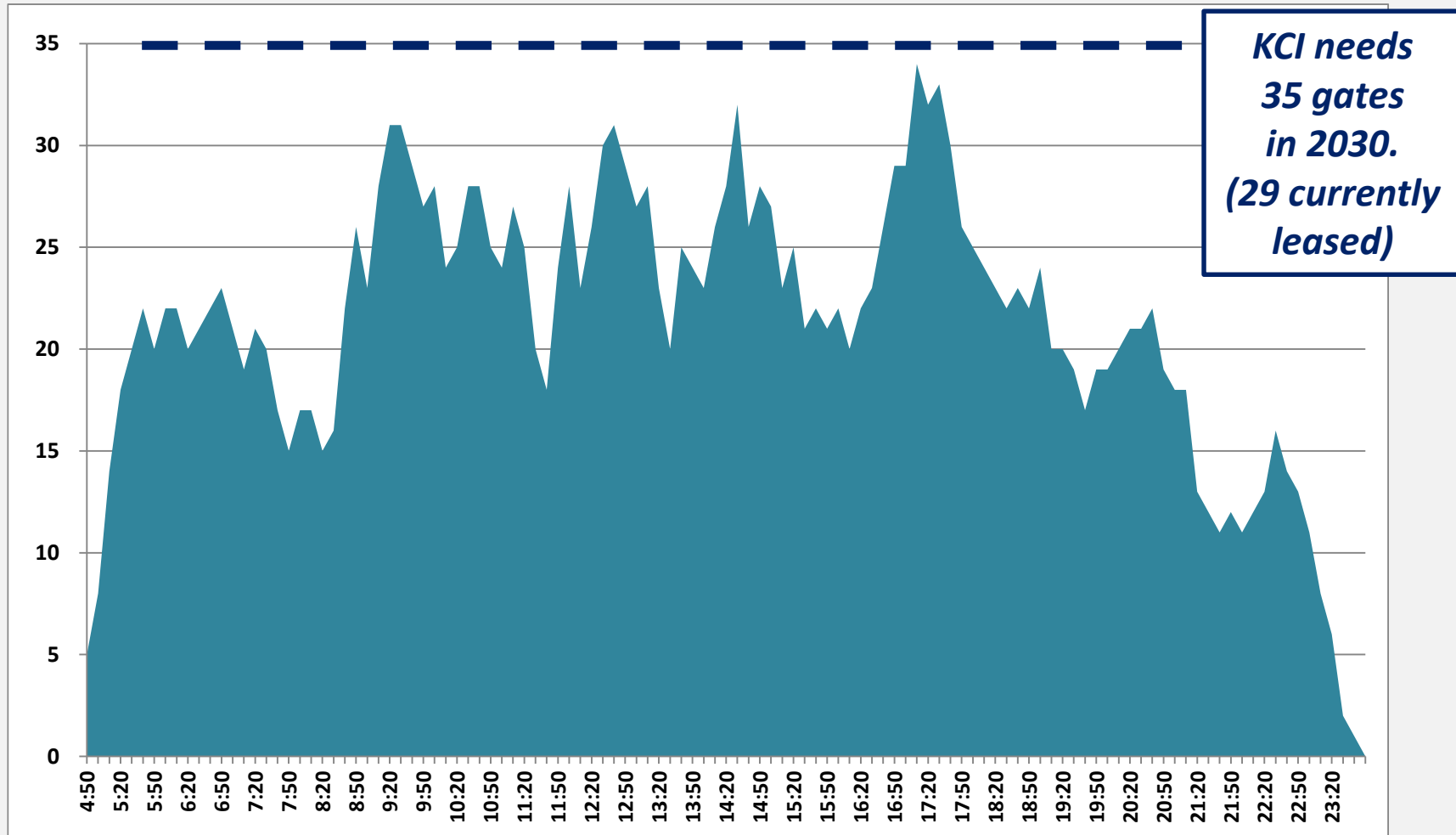
Derived Avg. Day Peak Month (ADPM) passengers based on forecasted schedules and load factors

## Annual Demand

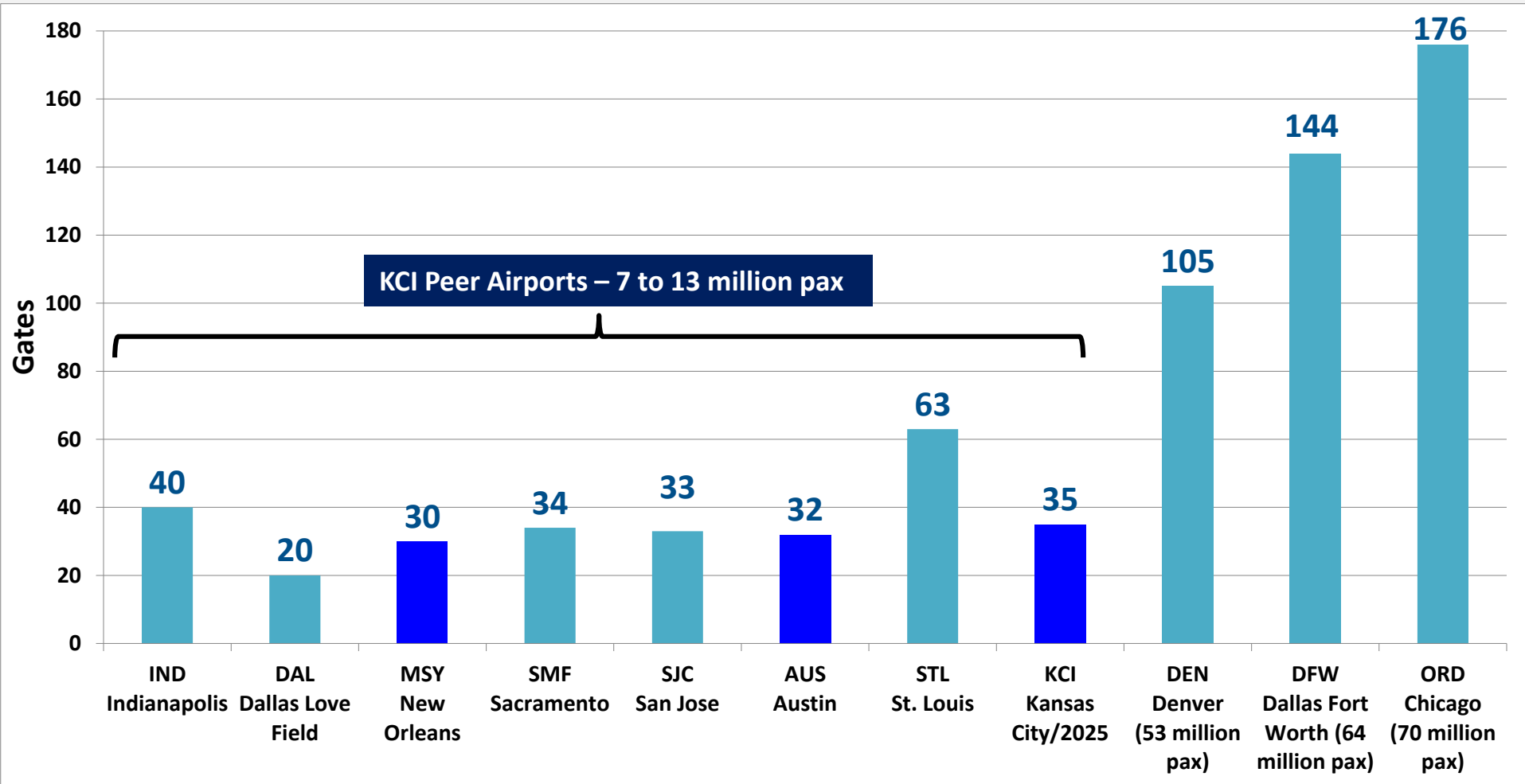
Derived annual passenger airline activity in 2025 and 2030 based on forecasted schedules

# KCI Forecast: Gate Requirements

## Aircraft Operations (Arrivals and Departures) in 2030



# Airport Terminal Gate Comparison



Note: AUS and MSY gate counts reflect projects planned and currently under construction. KCI count reflects KCI's future needs.

# Existing Space/Terminal Requirements

FUNCTION	Existing*	Requirements
<b>Gates</b>	<b>29</b>	<b>35</b>
Ticketing/Check-in	20,879	32,000
Security Checkpoint	29,951	18,640
Departure Lounges	100,281	81,600
Post-Security Departure Corridor	0	95,540
Post-Security Restrooms	4,949	11,200
Airline Club	0	2,500
International Arrivals	21,001	31,460
Concessions	60,097	70,660
Pre-Security Circulation, Restrooms, and Seating	156,283	58,200
Bag Claim	17,745	45,710
Baggage Makeup	72,761	82,080
Airline Operations/ATO/BSO	96,591	56,720
Non Public Spaces	91,955	49,450
Terminal Functions (HVAC, MEP)	101,357	117,200
<b>Total Area</b>	<b>773,850</b>	<b>752,960</b>

**Post-Security  
Space Undersized  
by Nearly One-Half**

**Pre-Security Space  
Nearly 3x Amount  
Needed**

**Bag Claim Space  
Undersized by  
Nearly 2/3rds**

**Non Public Space  
Oversized by  
Nearly 2x Amount  
Needed**

\*Existing Terminals B&C

# KCI Airport Considerations



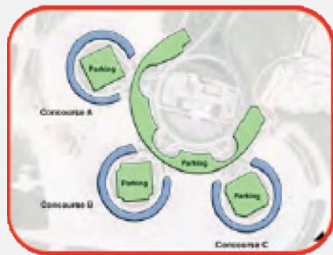


# Exhibit K: Program Goals

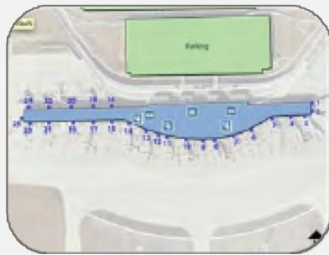


# U.S. Airport Terminal Configurations

Since DFW was opened in 1974, no other U.S. airport has replicated KCI's design



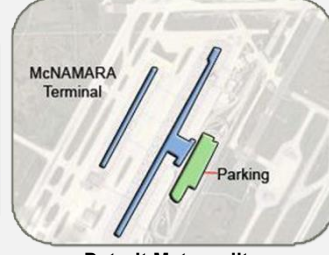
Kansas City Int'l



Austin-Bergstrom Int'l



Dallas Love Field



Detroit Metropolitan



General Mitchell Int'l (Milwaukee)



Indianapolis Int'l



John Wayne-Orange County



Lambert-St Louis Int'l



Louis Armstrong New Orleans Int'l



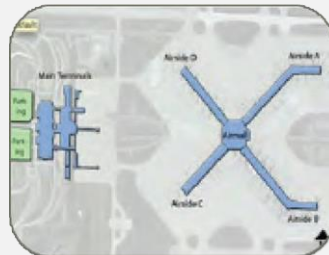
Metropolitan Oakland Int'l



Nashville Int'l



Norman Y. Mineta San Jose Int'l



Pittsburgh Int'l



Port Columbus Int'l



Portland Int'l



Raleigh-Durham Int'l



Sacramento Int'l



San Antonio Int'l

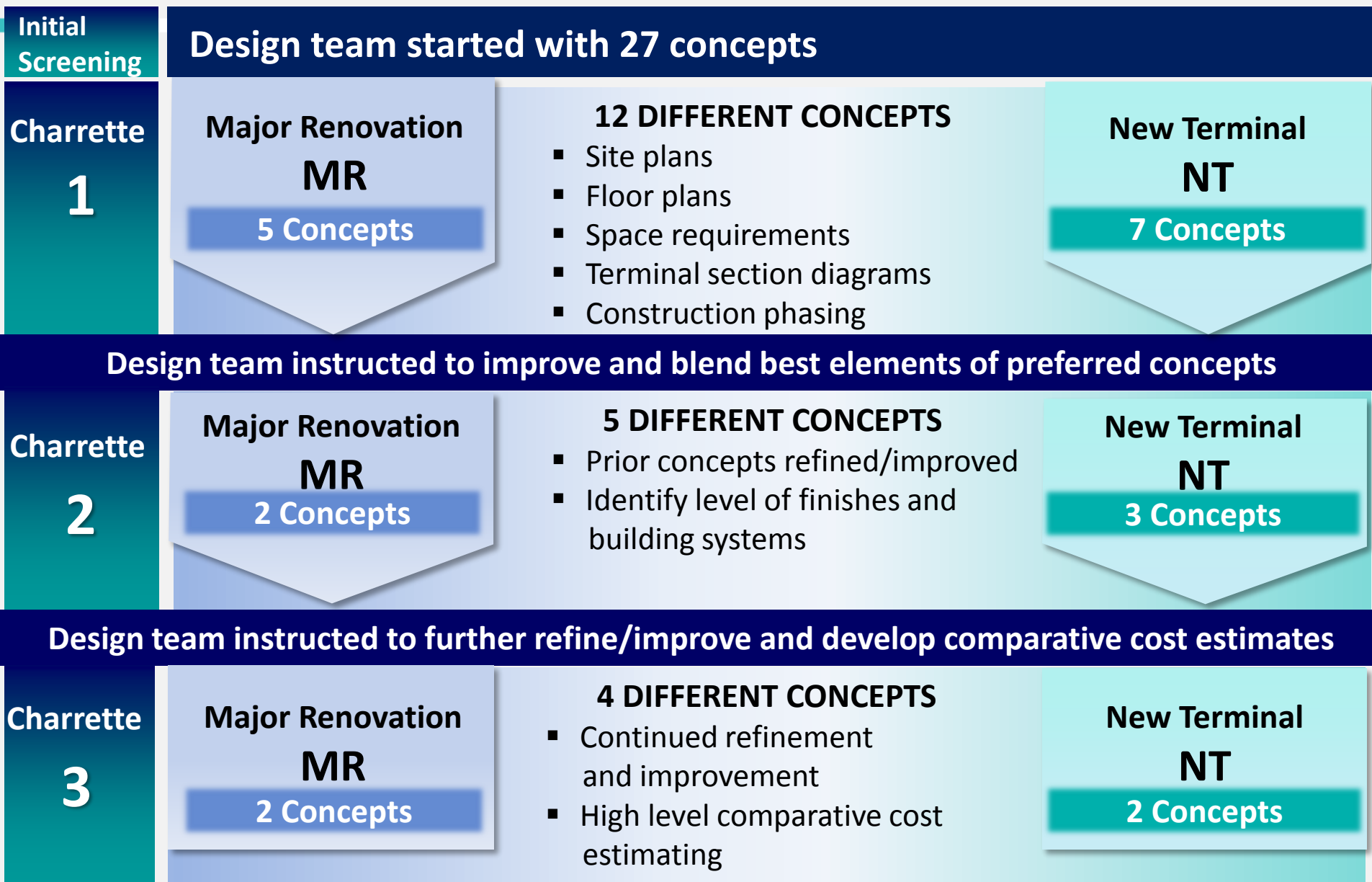


Southwest Florida Int'l



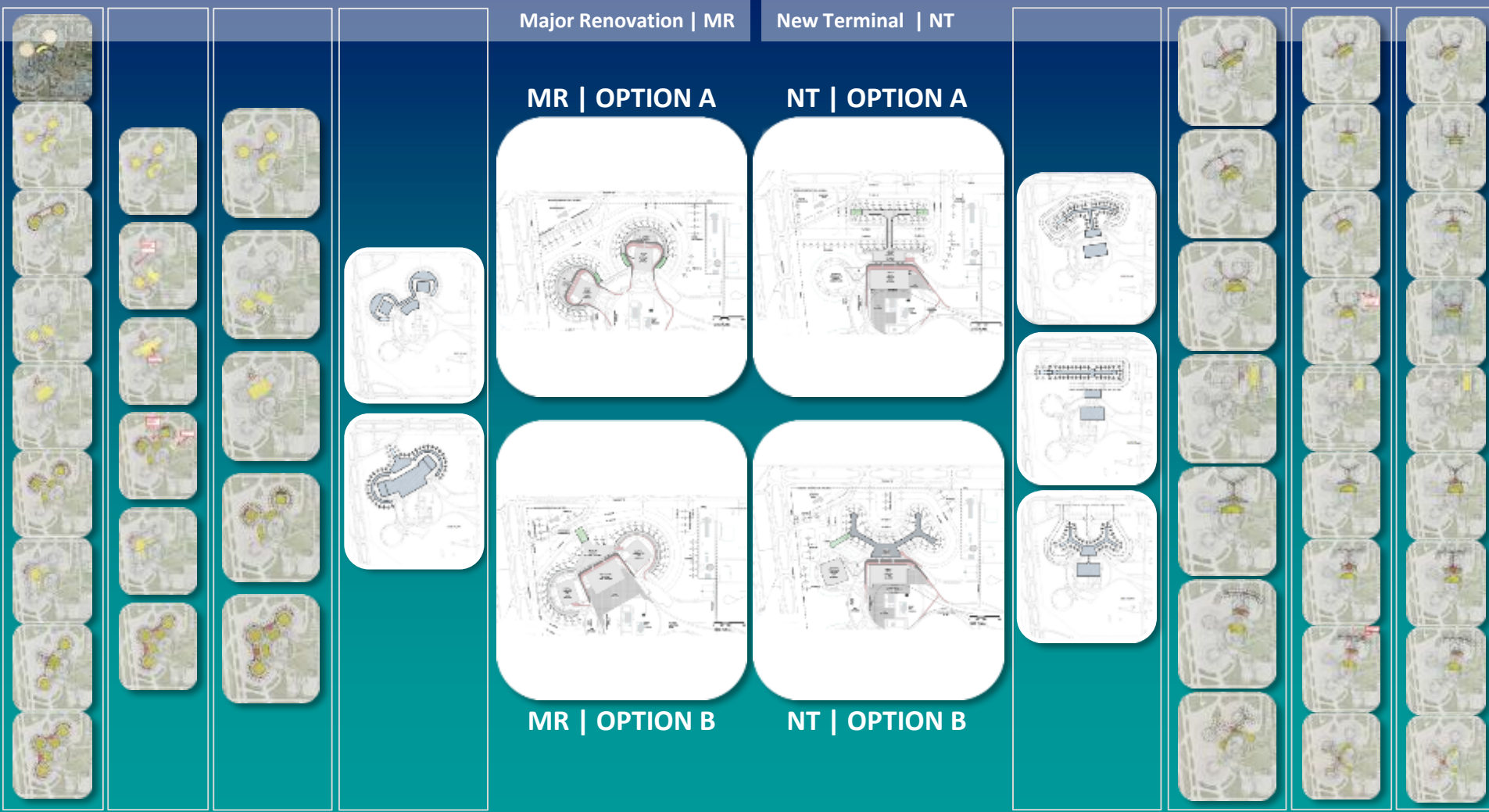
William P. Hobby (Houston)

# Two-Track Terminal Evaluation Process



# Overview of Terminal Planning Approach

KCAD and the airlines reviewed options identified in earlier studies, ideas from the Mayor's Terminal Advisory Group, and public comments; then generated numerous new terminal alternatives to optimize the configurations



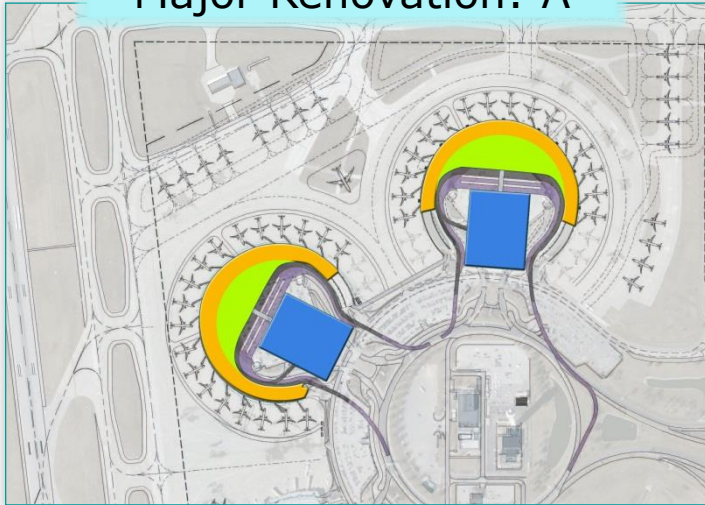


# Preliminary Findings & Next Steps

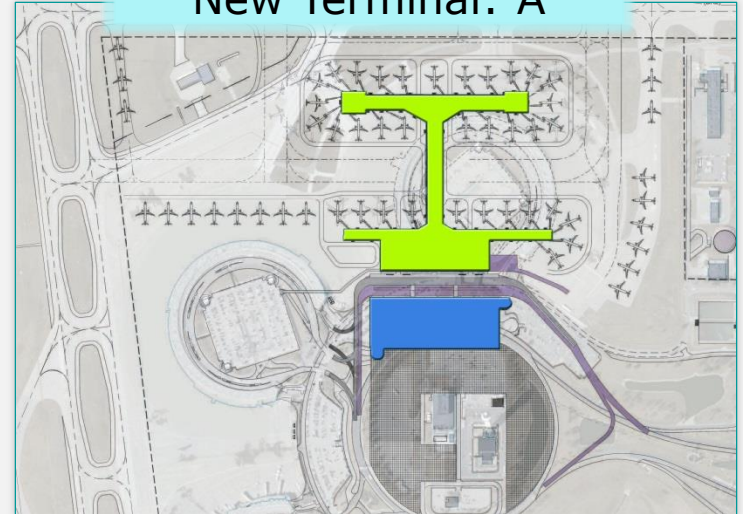


# Conceptual Site Plans

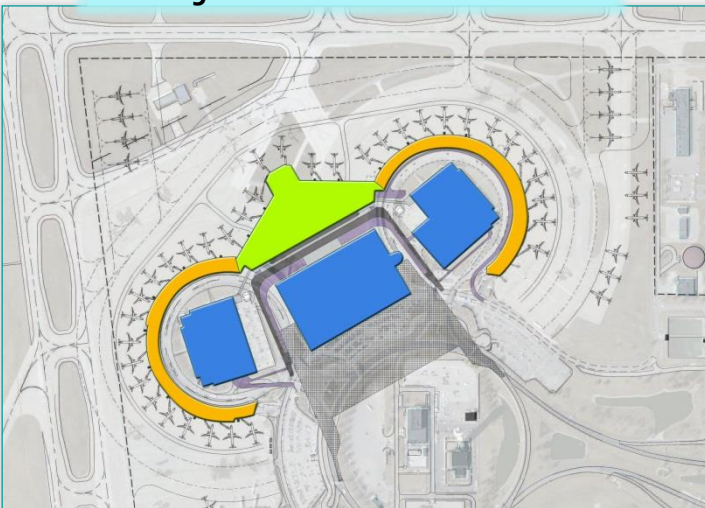
Major Renovation: A



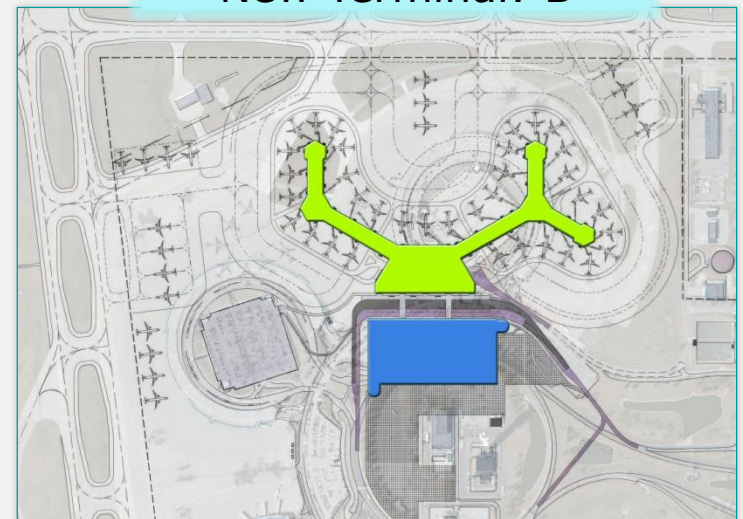
New Terminal: A



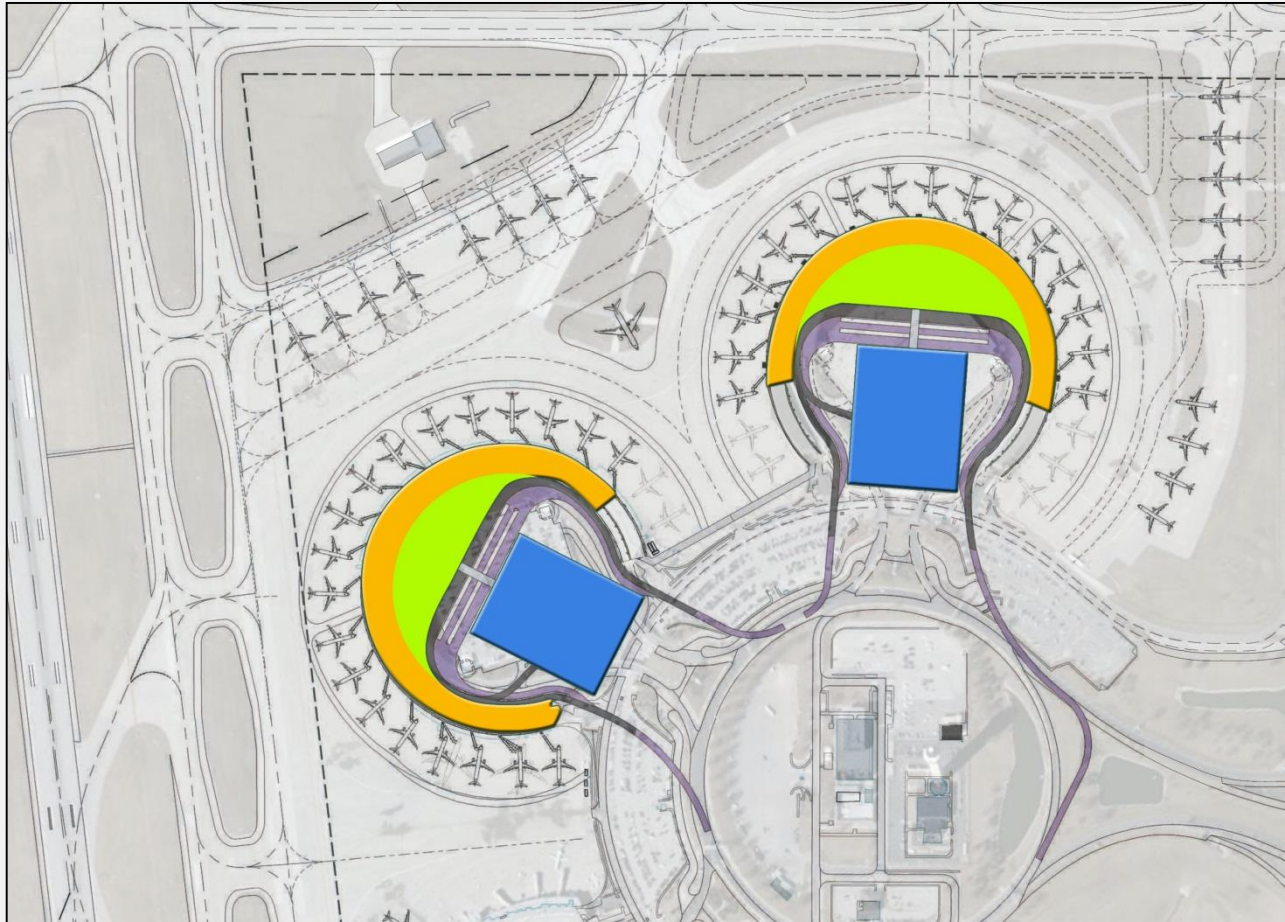
Major Renovation: B



New Terminal: B



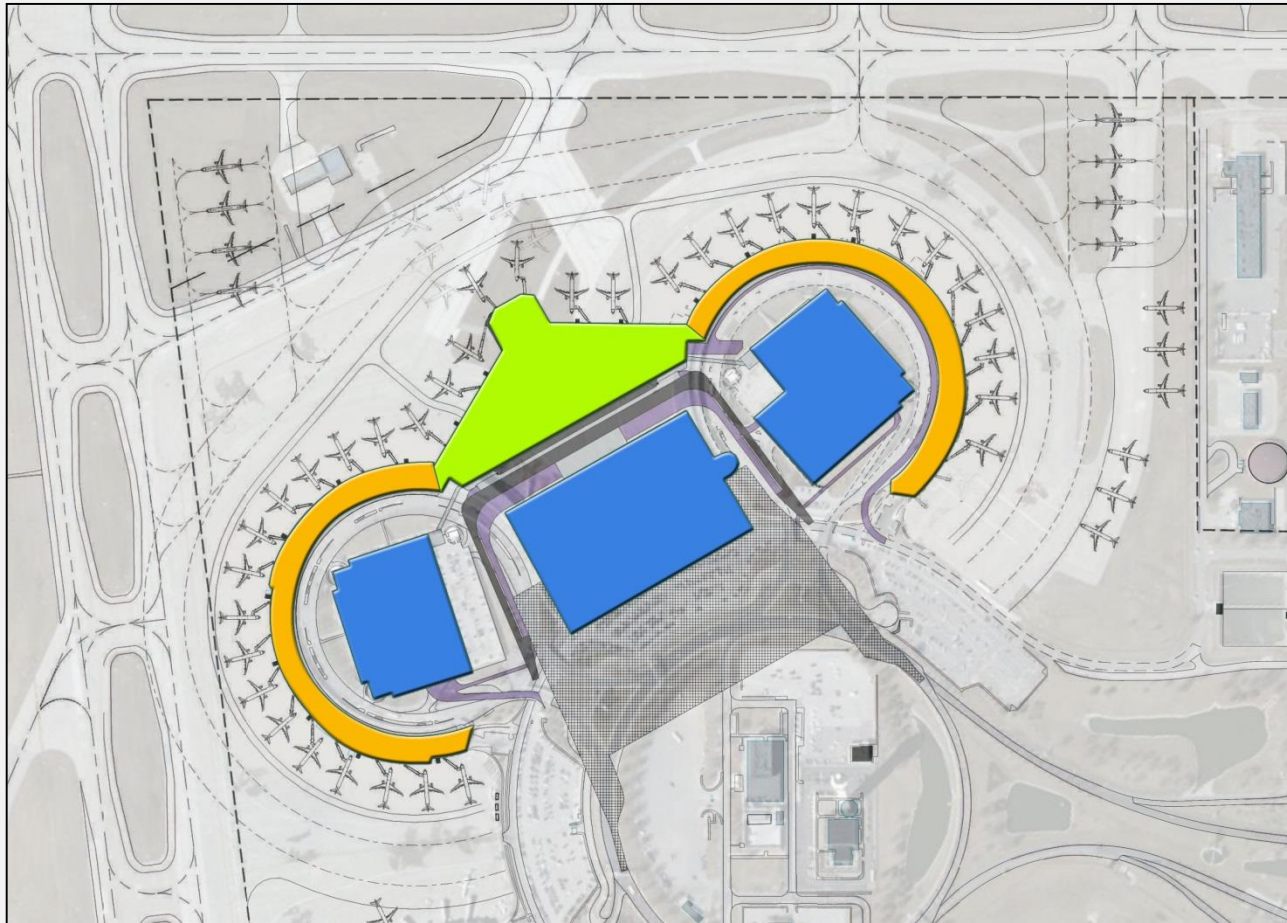
# Major Renovation: Concept A



- **New two-level terminals and major concourse renovations at Terminals A and B**
- **Centralized ticketing, security and baggage, in both terminals**
- **New two-level, arrivals and departures roadways**
- **2 new garages**



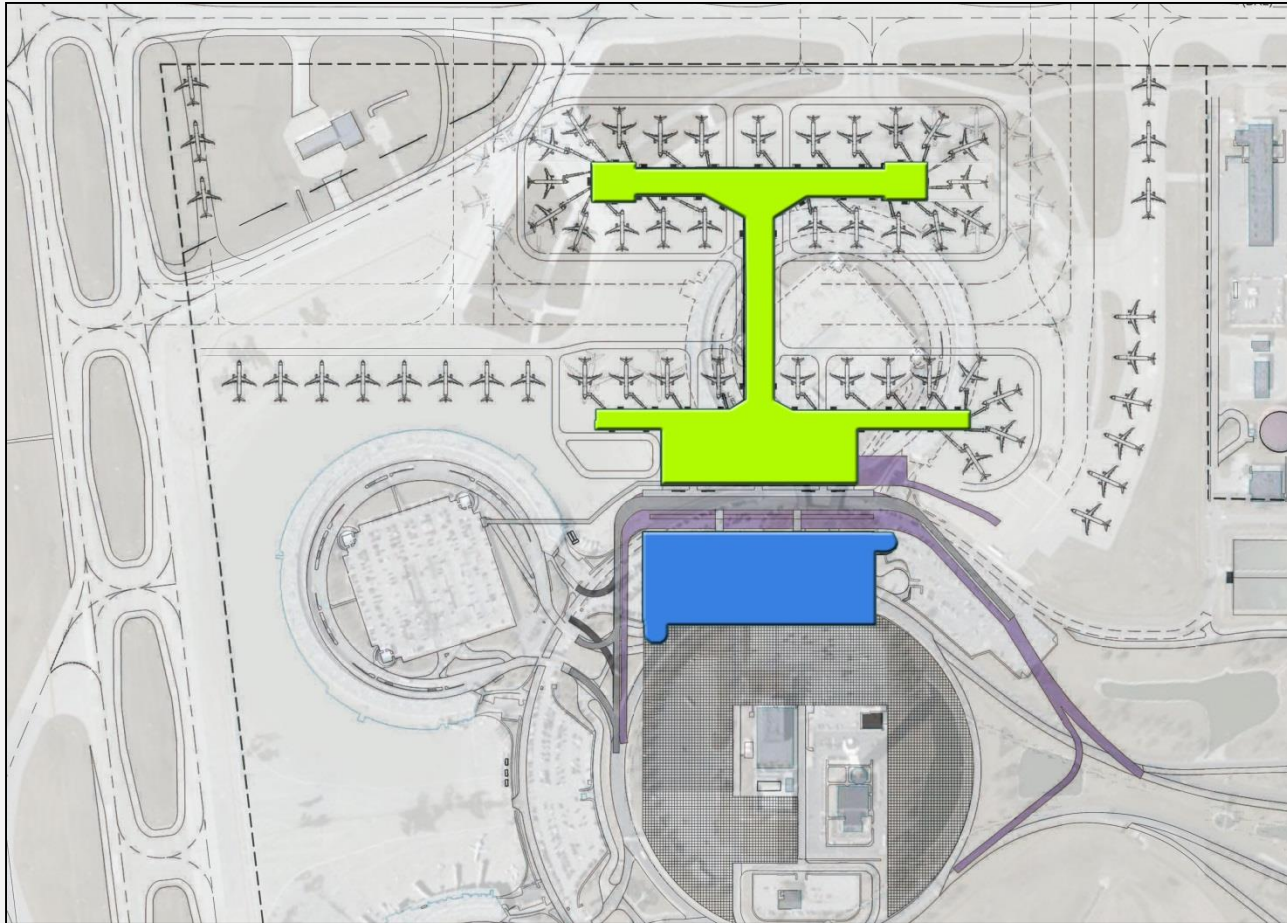
# Major Renovation: Concept B



- A new centralized, two-level terminal with major renovation of existing A & B concourses
- Consolidated ticketing, security and baggage
- New two-level, arrivals and departures roadways
- New central garage
- Renovation of 2 existing garages

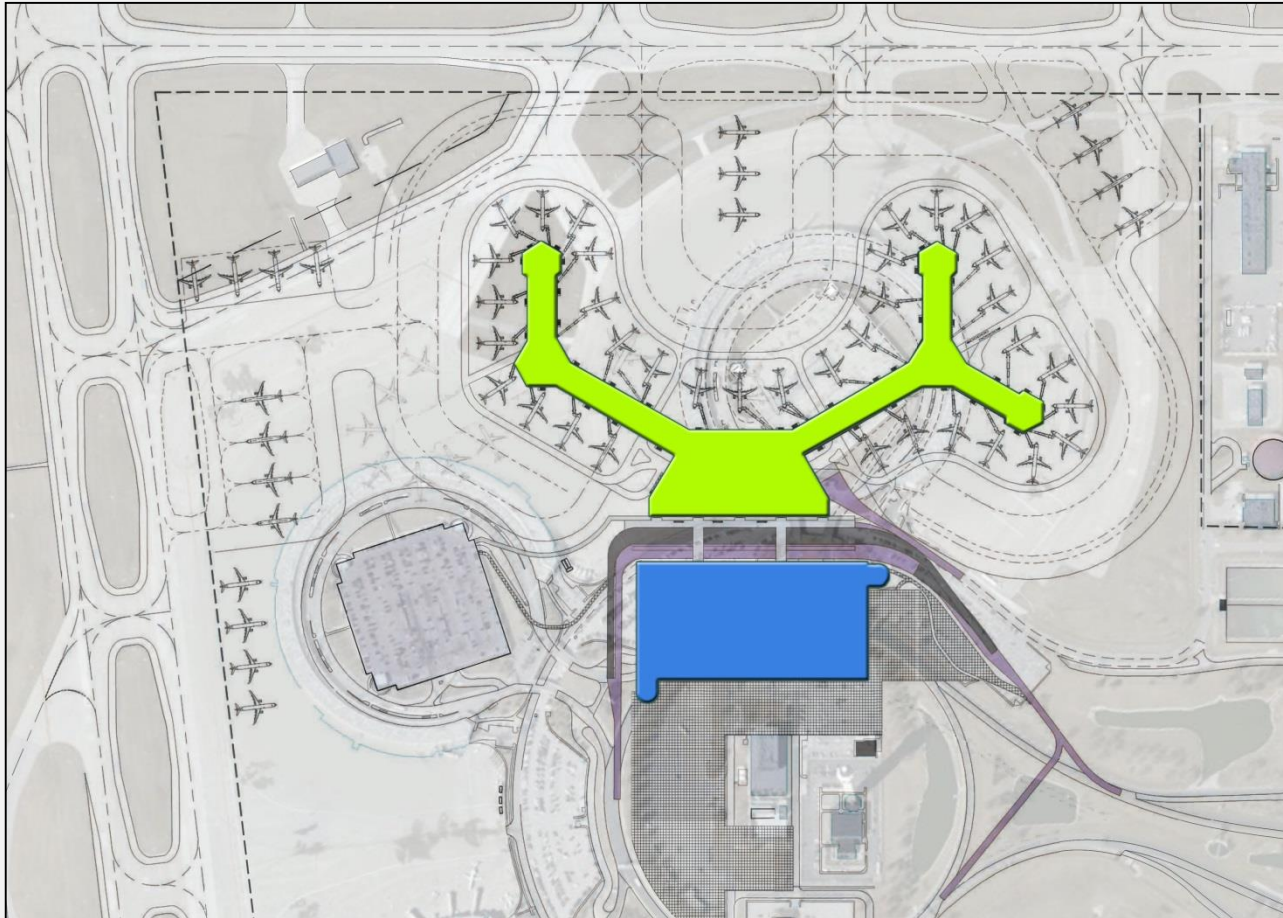


# New Terminal: Concept A



- **New two-level terminal and concourses**
- **New two-level, arrivals and departures roadway**
- **New parking garage**

# New Terminal: Concept B



- **New two-level terminal and concourses**
- **New two-level, arrivals and departures roadway**
- **New parking garage**















# Facility Requirements: MR / NT

FUNCTION	Requirements	Major Renovation	New Terminal
<b>Gates</b>	<b>35</b>	<b>35</b>	<b>35</b>
Ticketing/Check-in	32,000	49,344	34,901
Security Checkpoint	18,640	21,693	18,654
Departure Lounges	81,600	92,859	82,395
Public Space/Departure Corridor	164,940	211,518	170,048
Airline Club	2,500	4,163	2,546
International Arrivals	31,460	40,003	34,106
Concessions	70,660	73,245	68,633
Bag Claim	45,710	50,641	45,401
Baggage Makeup	82,080	127,494	79,882
Airline Operations/ATO/BSO	56,720	66,814	52,961
Non Public Spaces	49,450	49,766	44,818
Terminal Functions	117,200	120,038	117,663
<b>Total Area in Use (Square Feet)</b>	<b>752,960</b>	<b>907,578</b>	<b>752,008</b>
Unassigned Space		143,165	21,542
Unbuilt Tug Drive Through		29,056	24,889
Undeveloped Space			12,929
<b>Total Gross Area (Square Feet)</b>	<b>752,960</b>	<b>1,079,799</b>	<b>811,368</b>

- MR Oversized by 21%
- NT Right-Sized

- To Provide Future Expansion Capability:
- MR Oversized by 43%
  - NT Only 8%

# MR and NT Alternatives Evaluation

GOALS	MAJOR RENOVATION (MR)	NEW TERMINAL (NT)
<b>Construct-ability</b>	More difficult and longer time to construct than NTs with far more passenger disruptions during construction 	Isolated site allows easier and shorter construction time than MR with less passenger disruptions 
<b>Technology</b>	Some limitations on ability to include all new technologies 	All new technologies for all functions 
<b>Right-Sized</b>	Requires more space than required due to its inefficient configuration and duplication of functions 	Avoids duplicate central processors, bag systems, concessions, moving walkways, parking garages 
<b>Flexibility</b>	Existing concrete structure and circular configuration limits the flexibility of functional uses and expansion options 	New structure and layout provides better flexibility of spatial uses and more expansion potential 
<b>Efficiency</b>	Less operationally efficient than NT due to airside, terminal, and landside operational constraints 	More efficient airside, terminal and landside operations than MR 
<b>Customer Convenience</b>	Better than today's terminals but less than NT 	More passenger conveniences for all passengers 
<b>Affordability</b>	Higher capital and operating cost than NT 	Lower capital and operating cost than MR 

# Initial Findings:



- Airlines and KCAD concluded that major renovation alternatives presented significant shortfalls:
  - Higher capital and ongoing operating cost
  - Substandard operational performance
  - More difficult and lengthy construction
  - Limited options to improve customer convenience

# Airline Recommendation:



- The Airline-Airport Affairs Committee unanimously proposed tabling further study of major renovation options
- The Airline-Airport Affairs Committee will continue to review and refine new terminal options

# Next Steps: Exhibit K Process



Refine New  
Terminal Options



Final Presentation  
to City Council &  
Mayor

- Design & layout
- Cost estimations
- Airline agreement



July 21, 2015

# Mayor & City Council Business Session

KCI Development Program Process Update

